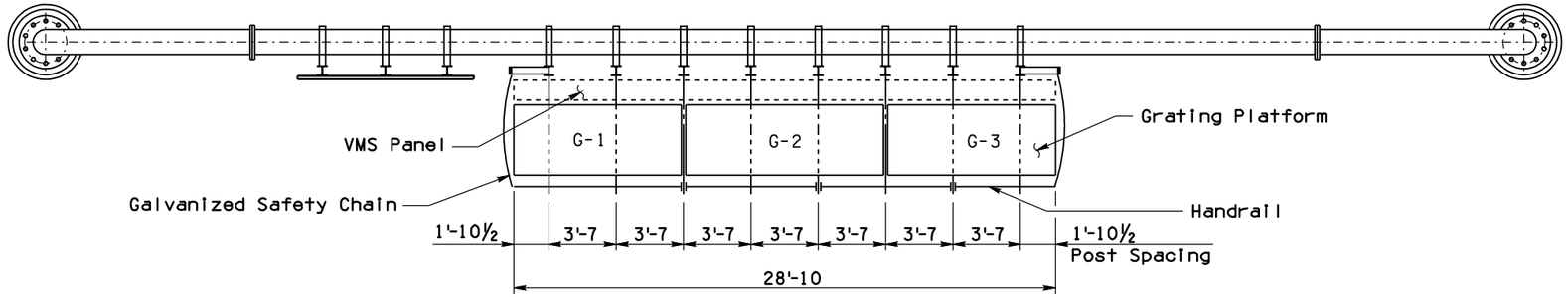
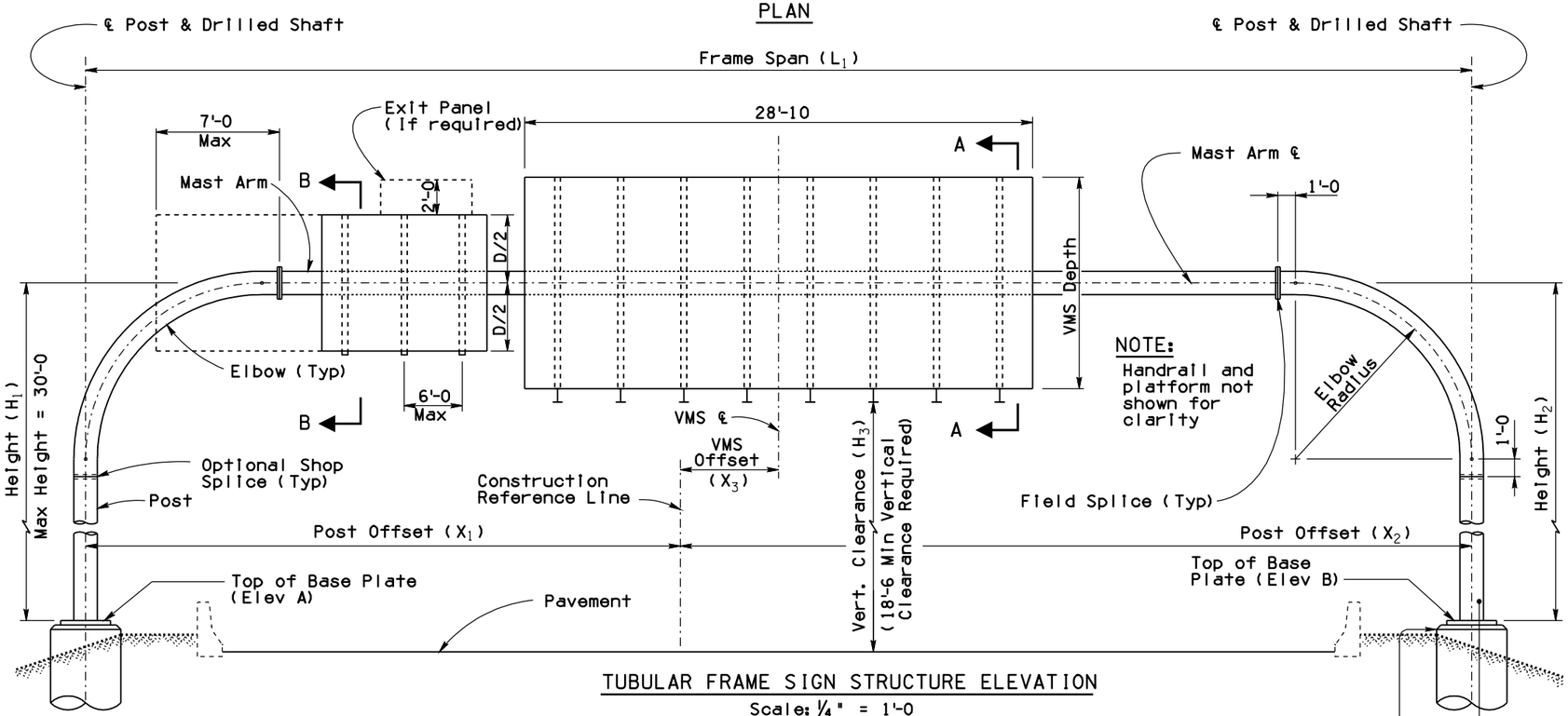


PLAN



TUBULAR FRAME SIGN STRUCTURE ELEVATION

Scale: ¼" = 1'-0

VMS DESCRIPTION

Depth = 9'-2
Length = 28'-10
Weight = 3000 lbs.

Drilled shaft locations and top of drilled shaft elevations shall be field verified by the Contractor prior to fabrication of posts.

TUBULAR FRAME DATA FOR VMS PANEL SUPPORT								
TYPE	TUBULAR FRAME			PIPE WALL THICKNESS (INCHES)			Max Sign Depth D*	Max Sign Area Sq. Ft.**
	Frame Span L_1	Nominal Pipe Dia	90° ELBOW RADIUS	Post	Elbow	Mast Arm		
1F	20'-40'	12"	10'-0	1.312	1.312	1.000		VMS
2F	41'-70'	16"	10'-0	1.219	1.219	0.500	12'	VMS+400
3F	71'-110'	20"	12'-0	1.280	1.280	0.625	12'	VMS+560
4F	111'-142'	22"	12'-0	1.125	1.125	0.875	12'	VMS+560

* For additional traffic sign panels
** Includes 2'-0 Exit Panel

Project drawings shall provide the following site specific VMS frame information on VMS location sheets:

VMS FRAME SUMMARY TABLE	
VMS NO.:	VERTICAL CLEARANCE, H_3:
ROUTE:	TOP OF BASE PLATE, Elev A:
MILE POST:	TOP OF BASE PLATE, Elev B:
STATION:	POST OFFSET, X_1:
FRAME SPAN, L_1:	POST OFFSET, X_2:
HEIGHT, H_1:	VMS OFFSET, X_3:
HEIGHT, H_2:	

OVERHEAD SIGN NOTES:

Wind Loading: 90 MPH Velocity

Maximum Height: 50'-0 from average surrounding terrain to the ℄ of the mast arm (Regardless of post height). The Tubular Overhead has been designed for site conditions which are level and neither elevated above the average surrounding terrain by more than the 50'-0 height shown nor supported on a bridge.

Maximum difference between post heights for an individual frame = 5'-0.

The maximum sign panel overlap onto elbow shall not exceed 7'-0 from field splice.

The sum of the sign panel area plus the exit panel area shall not exceed the maximum area shown in table. All signs shall be placed within Sign Panel Location.

For Standard pipe mast arms with lengths greater than 60'-0 an optional field splice will be permitted at the third points of mast arm length to facilitate hauling operations. All additional field splices in the Mast Arm proposed by the fabricator will not be allowed.

The Optional Shop Splice may not be used when the splice location is less than 5'-0 above the top of base plate. Shop splice of pipe sections (other than shown) are not permitted without prior approval.

Drill and tap for 1½" chase nipples and plug with recessed pipe plugs. Place perpendicular to sign panel axis and away from approaching traffic. Install nipples on shoulder posts only.

Before any portion of the tubular frame is assembled in its final position, the Contractor shall demonstrate to the Engineer by preassembly or other approved methods that the span length of the frame in the no load condition is equal to (± ½ inch) the field measured span length between foundations.

If the tubular frame is erected as one unit the frame shall be adequately suspended to avoid distortions or changes in span length between base plates.

The Field Splice surfaces shall be in full contact without gaps prior to the bolts being snug tightened and fully tensioned. The contact surface is the area defined by a 1⅜" radius around each bolt.

Provide electrical grounding at pole foundations per ADOT Standard Specification Section 732-3.03.

NOTES:

See SD 9.50 (2 of 5) for SECTION A-A
See SD 9.50 (3 of 5) for SECTION B-B
For General Notes see SD 9.20 (1 of 5)
For Camber Diagram see SD 9.20 (3 of 5)
For Foundation Details see SD 9.20 (2 of 5)
Provide 10 inch diameter hole in center of column base plate to accommodate conduits
For Frame and Hand hole Details see SD 9.20 (3 of 5)
For Sign Support Details see SD 9.20 (4 of 5)
For Overhead Light Details see SD 9.20 (5 of 5)

PRIOR DISTRIBUTION DATE 08/02

STANDARDS ENGINEER A. ALZUBI RECOMMENDED FOR APPROVAL	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP STANDARD DRAWING
GROUP MANAGER D. EBERHART APPROVED	VARIABLE MESSAGE SIGN TUBULAR FRAME PLAN AND ELEVATION
STANDARDS COMMITTEE APPROVED FOR DISTRIBUTION 04/19 DATE	DRAWING NO. SD 9.50 (1 of 5)